OMB Number: 4040-0019
Expiration Date: 02/28/2025

Project Abstract Summary

This Project Abstract Summary form must be submitted or the application will be considered incomplete. Ensure the Project Abstract field succinctly describes the project in plain language that the public can understand and use without the full proposal. Use 4,000 characters or less. Do not include personally identifiable, sensitive or proprietary information. Refer to Agency instructions for any additional Project Abstract field requirements. If the application is funded, your project abstract information (as submitted) will be made available to public websites and/or databases including USAspending.gov.

Funding Opportunity Number

EPA-R9-SFBWQIF-23-02

CFDA(s)

66.126

Applicant Name

City of Berkeley

Descriptive Title of Applicant's Project

West Berkeley and Aquatic Park Stormwater Improvement Project

Project Abstract

The proposed project calls for the construction of a Bioretention Basin with Hydrodynamic Separators in West Berkeley. The Basin would treat flood water and urban runoff traveling through the Channing and Bancroft Way micro-watersheds into the Aquatic Park Lagoon and subsequently into the Estuary. It will provide a significant improvement in the quality of the water entering the Aquatic Park lagoon and subsequently the San Francisco Bay. Aquatic Park is a large section of urban greenbelt with degraded wildlife habitat, and poor water quality. Bathymetric data indicate that the average depth of the lagoon has decreased by approximately 50% since 1970, highlighting a long-term concern that eutrophication could occur if hydrology and water quality improvements are not made within the next decade.

The bioretention basin proposed would occupy a portion of an existing parking lot on the east side of Aquatic Park. The Basin will treat a combined 44 acres of area in an urban watershed along Channing Way between San Pablo Ave and the Union Pacific Railroad (UPRR). The micro-watershed includes various land uses, including a railroad corridor, mixed-use, light industrial, commercial, and residential. The area of Channing Way immediately east of the UPRR corridor, similar to many areas of west Berkeley near the railroad, has a history of illegal dumping, which increases pollutants entering the storm drainage system that flows to the San Francisco Bay through Aquatic Park.

The Bioretention Basin will act as a soil and plant-based filtration device that removes pollutants through physical, biological, and chemical treatment processes. It will capture trash, debris, and floatable material 4.7 mm or larger as well as sediment. Meeting the Regional Water Quality Control Board's requirement for trash capture. In addition to trash and debris capture, sediment and hydrocarbons will also be captured. The Bioswale in the planned basin will remove chemical pollutants from the non-point source urban stormwater runoff that runs off the streets in the West Berkeley Channing Subdrainage Basin that collects stormwater from about 8.8 acres of impervious streets and sidewalks

The Basin's filter media and plants will remove nutrients, metals, organics, bacteria, and suspended solids. Bioretention screens out nutrients, polychlorinated biphenyl (PCB) and mercury from urban runoff. These features can help achieve Alameda County's goal of removing mercury and PCB from runoff, reducing the adverse impacts of urban runoff on receiving waters, including the Aquatic Park lagoon. PCB load reductions are attainable by installing the proposed bioretention basin, which is approximately 160 mg/year based on the land-use-based yield methodology described and cited in the Municipal Regional Stormwater Permit Fact Sheet.

West Berkeley and Aquatic Park Stormwater Improvement Project

I. Abstract:

The proposed project calls for the planning, design, and construction of a bioretention garden for the Channing Way Micro-Watershed and the installation of two Hydrodynamic separators on at Bancroft Street culvert and one at Channing Way culvert to drain untreated stormwater from the streets of West Berkeley directly into the Aquatic Park Lagoon. The bioretention garden and Separators will treat stormwater and urban runoff traveling through the Channing Way and Bancroft Street micro-watersheds, providing a significant improvement to the stormwater entering the Aquatic Park Lagoon and subsequently San Fransico Bay Estuary. The bioretention garden would occupy a portion of an existing parking lot adjacent to Dreamland Kids Playground on the east side of Aquatic Park. Creating a new green space planted with native varieties in place of the currently paved area.

The Aquatic Park Lagoon in West Berkeley is a man-made inland lagoon and park area that receives Bay waters through daily tidal action from the west as well as stormwater from Berkeley streets east of the lagoon. The water quality and upland habitats at the lagoon are highly degraded. Bathymetric data indicate that the average depth of the lagoon has decreased by approximately 50% since 1970, highlighting a long-term concern that eutrophication could occur if hydrology and water quality improvements are not made within the next decade.

The bioretention garden will treat a combined 4 acres of area in an urban watershed along Channing Way between San Pablo Ave and the Union Pacific Railroad (UPRR). The area includes various land uses, including a railroad corridor, mixed-uses, light industrial, commercial, and residential. The area of Channing Way immediately east of the UPRR corridor, similar to many areas of West Berkeley near the railroad, has a history of illegal dumping, which increases pollutants entering the storm drainage system that flows to the Aquatic Park Lagoon and then out to the San Francisco Bay.

The bioretention garden, in conjunction with the two Hydrodynamic separators, will remove pollutants through physical and biological treatment processes. Trash, debris, and floatable material 4.7 mm or larger will be captured, therefore meeting the San Francisco Bay Regional Water Quality Control Board's current requirements for trash capture from urban stormwater runoff . In addition, the Bioretention garden will remove chemical pollutants from the non-point source urban stormwater runoff that runs off 8.8 acres of impervious streets and sidewalks in the West Berkeley Channing Subdrainage Basin.

The Garden's plants and soil will filter the stormwater runoff and remove nutrients, metals, including mercury, polychlorinated biphenyls (PCBs), organic compounds, bacteria, and suspended solids. These functions can help achieve Alameda County's key goal of removing mercury and PCBs from runoff, reducing the adverse impacts of urban runoff on receiving waters, including the Aquatic Park Lagoon. Using the land-based yield

methodology described and cited in the Municipal Regional Stormwater Permit Fact Sheet, this project will prevent 160 mg per acre per year of PCBs from entering Aquatic Park Lagoon and the San Fransico Bay.

II Water quality improvement and/or wetlands restoration:

A. Strategic Plan: The City of Berkeley has a strategic plan to improve the water quality at the Aquatic Park Lagoon to enhance habitat and recreational values with four phases. Phase One involved cleaning out the five obstructed tide tube culverts on the west side of the Aquatic Park Lagoon that connect with the San Francisco Bay underneath Interstate 80; this work was completed in 2020. Over the past three decades, the tide tubes had become almost completely blocked with siltation and tube worm casings, thus drastically impairing tidal circulation which impaired the water quality of the Lagoon. Phase Two will involve a renovation of these five tide tube culverts because they have begun to fail and could lead to a significant collapse of the roadway surface of Interstate 80 within ten years; this phase will also renovate the two existing tide tube culverts that connect the main lagoon to the smaller adjacent lagoon (the Model Yacht Basin), which has a large tide tube culvert that also connects to the Bay underneath Interstate 80. Phase Three will involve the installation of stormwater treatment facilities on the nine culverts on the east side of the lagoon that drain untreated stormwater from the impervious streets and sidewalks of West Berkeley into the main lagoon. Treatment facilities will be comprised of hydrodynamic trash separators as well as bioretention gardens that remove chemical and biological pollutants from stormwater at all feasible locations at the lagoon. Phase Four will involve the replacement of the final deteriorated segments of these nine culverts on the eastern edge of the lagoon, as well as dredging the sediments that have accumulated at each culvert since the original installation of the Aquatic Park Lagoon and the hydrologic system in 1937.

The City is currently looking at a variety of funding sources for all phases of work. This application to the U.S. EPA Water Quality Improvement Fund focuses on Phase Three, which will pilot the installation of stormwater treatment facilities at culverts on the east side of the lagoon (the current project will install hydrodynamic trash separators at Bancroft Street and Channing Way, and a bioretention garden at Channing Way).

B. Alignment with EPA Plan Objectives:
The environmental value and significance of the Aquatic Park Lagoon Protection Project meets two EPA Strategic Plan Objectives.

1. Objective 1.2: Accelerate Resilience and Adaptation to Climate Change Impacts:
Over the past three decades, the City has observed extensive flooding problems at Aquatic Park during large storm events whereby fresh water from urban runoff drains quickly into the lagoon but could not drain to the Bay due blocked tide tube culverts. There have been several fish kills at the lagoon following these storm events, likely due to sudden spikes in stormwater runoff in the brackish lagoon. During warm weather periods in late spring

extreme growth in aquatic vegetation (widgeon grass) and algal blooms occur, which can lead to reduced levels of dissolved oxygen and degraded habitat conditions.

The construction of a bioretention garden and the installation two hydrodynamic separators serving the Channing Way and Bancroft Street Watersheds will help reduce the amount of debris, and floatable material 4.7 mm or larger into Aquatic Park Lagoon and to the San Francisco Bay, which helps the City make progress in meeting the San Francisco Bay Regional Water Quality Control Board's current requirement for full trash capture at municipal stormwater facilities. The installation of trash and sediment capture devices at stormwater entry points to the 67-acre Aquatic Park Lagoon will accelerate the improvement of its resilience to climate change based increased storm activity, in a very direct way. of storm activity in a very direct way.

Objective 5.2 Protect and Restore Waterbodies and Watersheds:
The successful completion of the Project will provide significant benefits. First, the protection and preservation of the 67-acre brackish lagoon located in Berkeley's Aquatic Park. The Lagoon is unique among human-created Bay Area Lagoons because it provides both estuarine habitat for a variety of migrating and resident birds as well as aquatic vegetation and benthic organisms adapted to brackish waters. According to the U.S. Fish and Wildlife Service the Park's the habitat is home to 12 endangered or threatened species.

Over the past three decades, when the tide tubes were blocked, each winter brought extensive flooding which affected non-profit programs and other recreational features at Aquatic Park as well as commercial businesses on 2nd Street in West Berkeley. After the tide tubes were cleaned in 2020, Aquatic Park has experienced zero flooding. However, large storms over the past few years have increased the amount of untreated stormwater entering the Lagoon. During warm weather periods in late spring, extreme growth in aquatic vegetation (widgeon grass) and algal blooms occur, which can lead to degraded habitat conditions. Urban runoff from City streets along the eastern edge of the lagoon occurs after storms and brings pollutants and nutrients into the Lagoon The proposed stormwater treatment project will increase the resilience of the Lagoon by directly reducing untreated stormwater runoff and its negative effects.

Second, the Lagoon receives extensive sediment from urban runoff. Lagoon depth has decreased by almost 50% since 1970. This project will be the first phase of a program to prevent the filling in of the Aquatic Park Lagoon and its habitat values from increased urban runoff sediment that will be caused by increased storm activity due to climate change. The project will reverse the deterioration of the Channing Way and Bancroft Street micro-watersheds. These are the only two micro-watersheds within the Berkely City limits. Due to the Project, there will be a substantial increase in the quality of the water entering San Fransisco Bay from the Lagoon.

Objective 7.2: Promote Pollution Prevention: Bioretention areas remove pollutants through physical and biological treatment processes. The proposed Bioretention garden's filter media and plants will remove nutrients, metals, organics, bacteria, and suspended solids. Polychlorinated biphenyl (PCB) and mercury from urban runoff will also be removed. This would provide a substantial contribution to pollution prevention efforts at Aquatic Park Lagoon.

III. Project Activities:

1. The Public Engagement Process was established by City Staff in discussions with Aquatic Park stakeholders including: Berkeley Paddling & Rowing Club, Bay Area Outreach and Recreation Program, Youth Musical Theater Company, San Francisco Estuary Institute, local Ornithologists, the Aquatic Park Action Committee and Friends of 5 Creek

2 The required area of surface paving, binder sublayer and runner crush underlayment of the parking lot on the east side of Aquatic Park will be removed.

3. The open area created will be prepared as required.

4. The Garden will be created and native plant species selected

5. The Garden will be planted at as part of a community event.

6, A regular maintenance activities schedule will be created to ensure that Bioretention garden continues to function as designed. These activities include the maintenance of vegetation and the irrigation system; removing debris, accumulated sediment, and trash; and inspecting and replacing mulch as needed.

7. There will be a regular cleaning and inspection for the hydrodynamic separator units. Maintenance crews will directly measure hydrocarbons, trash, and sediment captured by the systems, allowing for a regular evaluation of performance.

8.The Aquatic Park Lagoon will continue to be monitored weekly for the possible presence of human health risks and the Audubon Society will conduct an annual count of bird species.

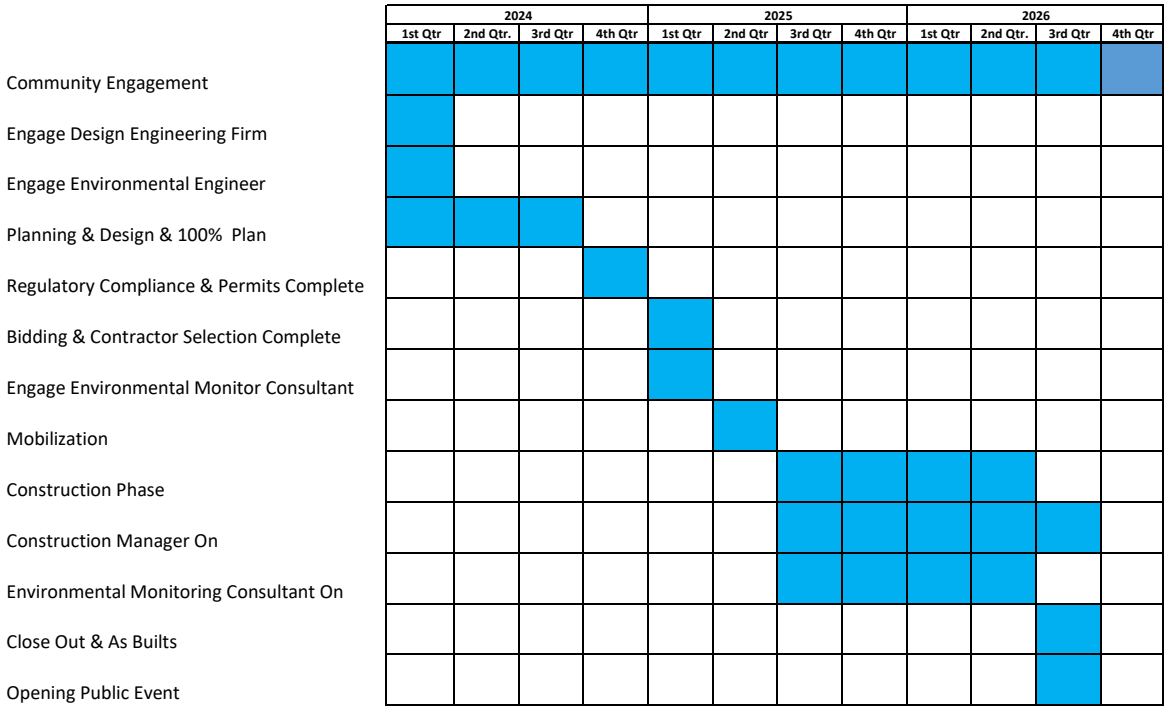
IV. Climate Change Resiliency-

The AP Lagoon is isolated by Interstate 80 to the west and by the railroad track to the east with an eroding shoreline and intake culvert system on the eastside of the Lagoon, which impedes the natural flow of water, fish, and mammals. The addition of trash capture devices to the stormwater culvert system on the east will reduce the volume of trash and sediment going into the Lagoon. This will address the Lagoon's water quality resiliency for habitat values in light of anticipated increases storms.

The bioretention garden will screen out nutrients now entering the Lagoon from flood waters and runoff will be filtered. The introduction of these nutrients has contributed to periodic fish kills to occur in the Lagoon due to algal blooms, rapid temperature increases, and changes in salinity. During warm weather periods in late spring, extreme growth in aquatic vegetation (widgeon grass) and algal blooms occur, which have led to degraded habitat conditions.

The construction of a bioretention garden and the installation two hydrodynamic separators serving the Channing Way and Bancroft Street Watersheds will help reduce the amount of debris, and floatable material 4.7 mm or larger into Aquatic Park Lagoon and to the Bay, which helps the City make progress in meeting the San Francisco Bay Regional Water Quality Control Board's current requirement for full trash capture at municipal stormwater facilities. The installation of trash and sediment capture devices at stormwater entry points to the 67-acre Aquatic Park Lagoon will accelerate the improvement of its resilience to climate change based increased storm activity, in a very direct way. of storm activity in a very direct way.

West Berkeley and Aquatic Park Stormwater Improvement Project Schedule



VI. CCMP: Objectives Implemented:

A: Protect, restore, and enhance ecological conditions and processes that support self-sustaining natural communities

B: Eliminate or reduce threats to natural communities

I: Reduce contaminants entering the system and improve water quality

J. Build public support for the protection and restoration of the ecological habitat.

VII. CCMP: Actions Implemented:

1: Plan for increased climate resiliency that incorporates natural resource protection.

12. Maximize habitat benefits of managed ponds and other non-tidal wetlands and

waters

19: Manage stormwater with low impact development and green stormwater Infrastructure

21: Address emerging contaminants in the Estuary.

24: Provide equitable public access and recreational opportunities compatible with wildlife.

25: Champions the Estuary

VIII. Outputs and Out Comes:

A. Outputs:

1.Construction of a bioretention garden with Hydrodynamic separators for the Channing and Bancroft micro-watersheds.

2. Establishment of a regular inspection & maintenance schedule to insure the Bioretention garden functions as designed. These include the maintenance of vegetation and the irrigation system; removing debris, accumulated sediment, and trash; and inspecting and replacing mulch as needed.

3.Establishment of regular inspection & maintenance schedule for the two Hydrodynamic separators insure trash, sediment, non-soluble materials polluting are being removed from flood waters before reaching the Aquatic Park Lagoon.

4. Regular Consultations with Aquatic Park Stakeholders; Berkeley Paddling & Rowing Club, Bay Area Outreach and Recreation Program, Youth Musical Theater Company, San Francisco Estuary Institute, local Ornithology, and boaters about Lagoon & habitat conditions.

5. Announced and published; public to be heard meetings with community members and other interested parties.

6. During the Construction and Installation Components progress and performance will be overseen by Supervising Civil Engineer of the Berkeley Public Works Department.

7. Stakeholder Engagement overseen by the Director of Parks, Recreation and Waterfront.

B. Short Term Outcomes:

1. The bioretention areas will act as a soil and plant-based filtration devices will remove nutrients, metals, organics, bacteria, and suspended solids through biological and physical treatment

2. The Garden will remove mercury and polychlorinated biphenyl (PCB) from urban runoff.

3. The two Hydrodynamic separators will prevent sediment, trash, and plastics from entering the Park Lagoon from the Bancroft Street and Channing Way .micro watersheds.

4. The quality of flood waters entering the Lagoon and subsequently into the Estuary will be significantly improved.

5. Decreased the likelihood a eutrophication occurrence.

6. Reduced the incidence of algal blooms.

C. Long-term outcomes:

1. The shrinkage of average Lagoon depth will be reduced and eventually be halted.

2. Preservation of the Lagoon will help to safeguard the habitant in and around the Lagoon protecting 12 endangered or threatened species.(USF&WS).

3. Preservation of the Lagoon will insure the continued operation of the Park providing unfettered year-round access to it’s recreational, educational, and cultural activities.

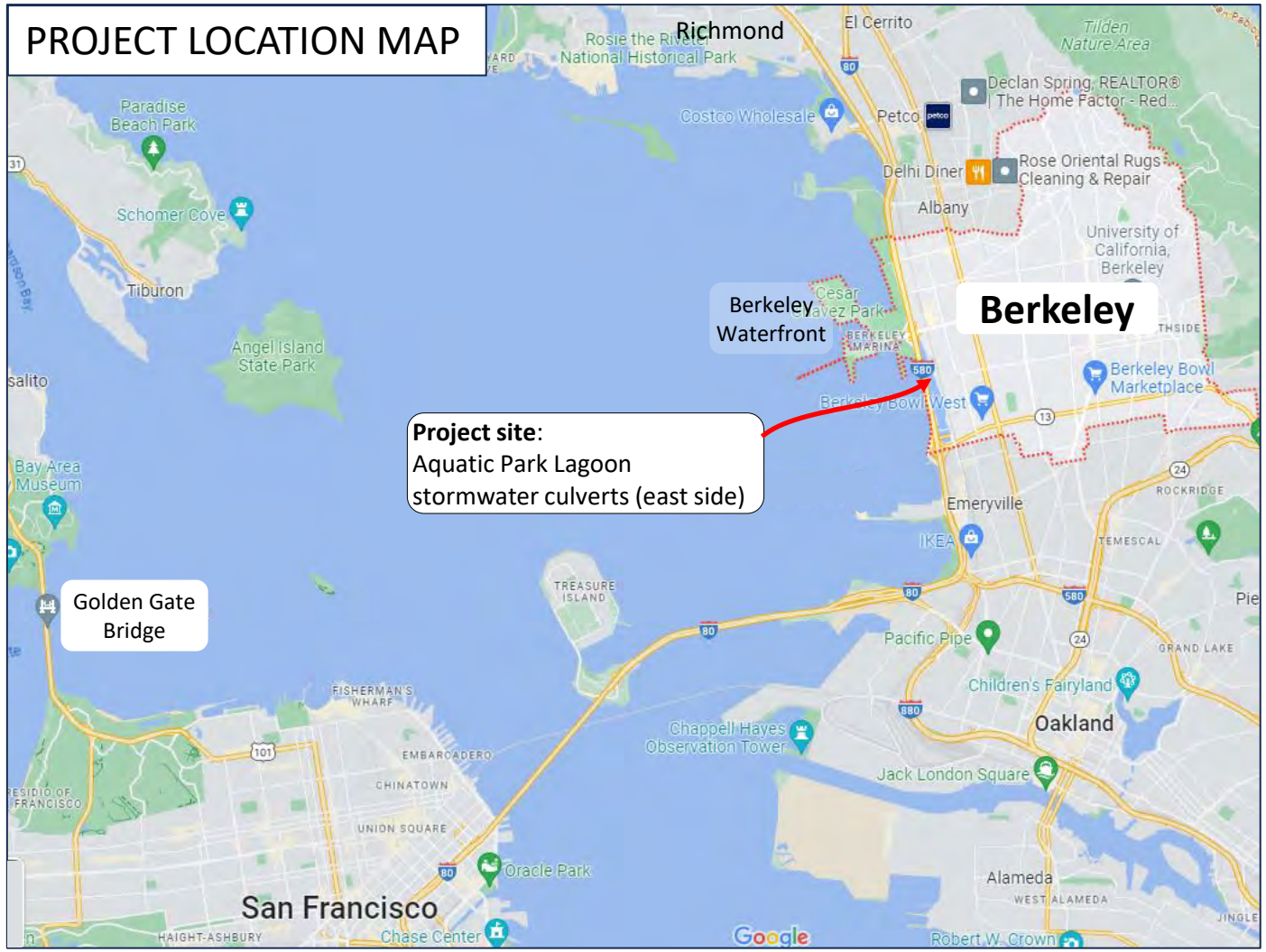
4.Ultimately preserving and enhancing existing public access for recreational uses.

5.Uplands restoration.

6. Elimination of algal blooms preserving the fish population.

IX. **Geographic Location**- The proposed bioretention garden would occupy a portion of the existing parking lot adjacent to the Dreamland Kids Playground on the east side of the Aquatic Park Lagoon. It would treat 4 to 5 acres of the urban watershed along Channing Way between San Pablo Ave and the Union Pacific Railroad (UPRR). The watershed includes various land uses, including a railroad corridor, mixed-use, light industrial, commercial, and residential. Blow is a map of the Project Area.

PROJECT LOCATION MAP

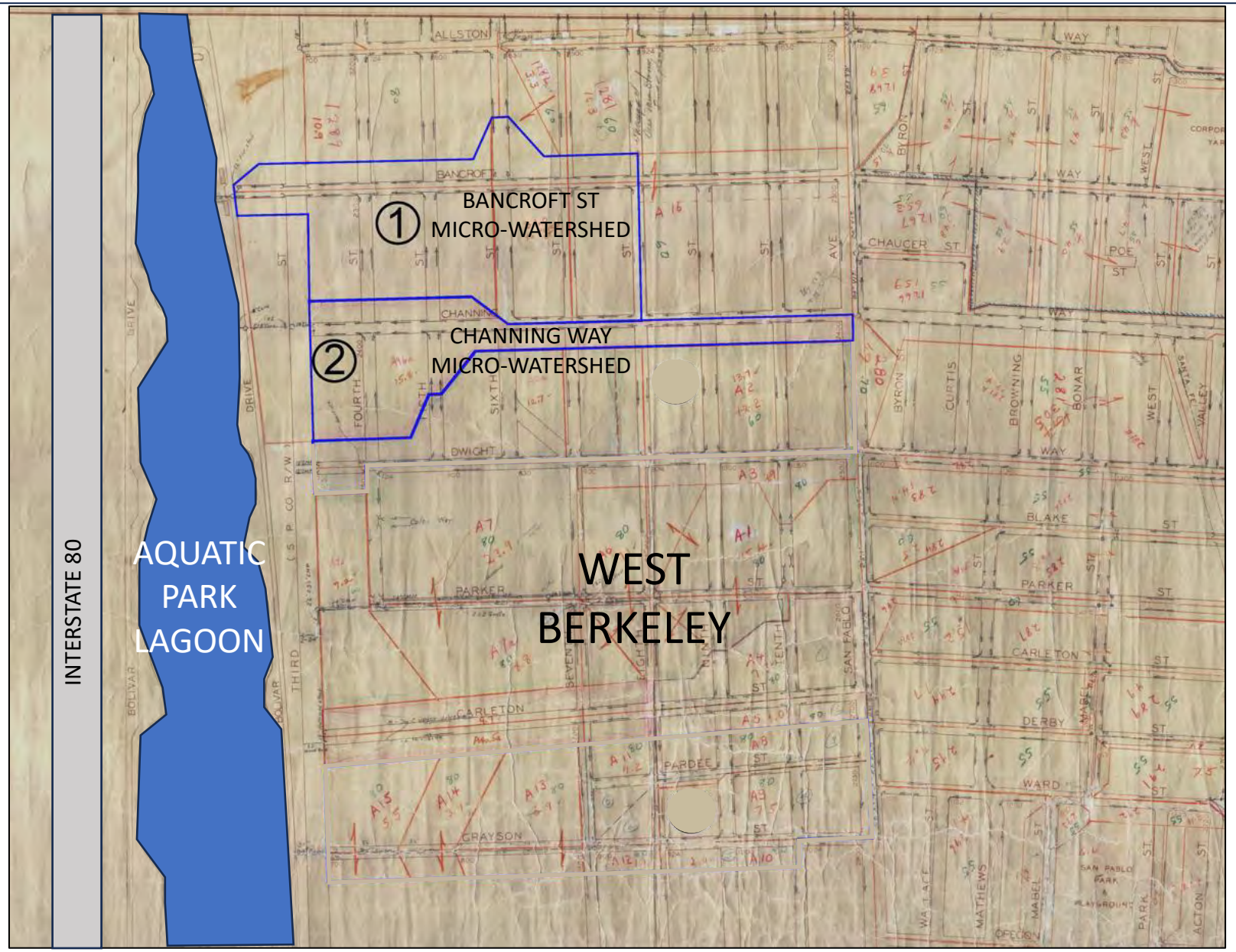


SITE MAP – OVERVIEW – Berkeley Aquatic Park Lagoon Stormwater Treatment Installation Project - Pilot

WEST BERKELEY – MAP OF RIGHT-OF-WAY STREETS AND PROJECT MICRO-WATERSHEDS FEEDING AQUATIC PARK LAGOON

NORTH

SAN FRANCISCO BAY



X. Budget Details

West Berkeley and Aquatic Park Storm Water Improvement Project

	Item Name	Quantity	Units	Unit Cost/Rate	Cost Estimate Total	Year 1	Year 2	Year 3	EPA Funds	Local Match	Total
1	**Planing & Design**										
	Engineering/Design Firm	**Contract**	**1**	**$170,000**	**$170,000**	**$100,000**	**$50,000**	**$20,000**	**$85,000**	**$85,000**	**$170,000**
	1.An Engineering Firm will developproject design with stakeholder, community and staff input. 2. Prepare Construction Documents and RFP.3 Provide Project Management servises.Prepare monthly progress reports on all project activities to the Oversight Committee which will include.City Manager, Director of Parks, Recreaction & Waterfront.4. Director of Punlic Works and the City's Supervising Civil Engineer who will act as Project Supervisor.										
2	**Environmental Engineer**										
	CEQA & EPA Approval & Permits	**Contract**	**1**	**$ 30,000.00**	**$30,000**	**$20,000**	**$10,000**	**$0**	**$30,000**		**$30,000**
	Responsible for preparing and presenting necessary documents and reports to CEQA & EPA for approval.. Secures all needed permits Berkeley Paddling & Rowing Club, Bay Area Outreach and Recreation Program, Youth Musical Theater Company, San Francisco Estuary Institute, local Ornithologists, and Boaters.Also the Friends of Five Creek and the Save the Aquatic Park										
3	**Community Outreach & Engagement**										
	Engagement Meeting & Public Information	**Duration**	**1**	**$10,000**	**$ 10,000**	**$ 2,500**	**$ 2,500**	**$ 5,000**	**$0**	**$ 10,000**	**$ 10,000**
	Community Engagement Meetings will be held with the general community throughout the process & there public notificatons of these meetings. As a part of this engaement there will being ongoing consulations with stakeholders including; Berkeley Paddling & Rowing Club, Bay Area Outreach and Recreation Program, Youth Musical Theater Company, San Francisco Estuary										
4	**Construction Cost**										
	Contractor	**Contract**	**1**	**$2,600,000**	**$2,600,000**			**$2,600,000**	**$1,300,000**	**$1,300,000**	**$2,600,000**
	Estimated Cost of accepted bid for project completion. Holds weekly meetings with										
5	**Project Management Contractor**										
	Contract	**Contract**	**1**	**$140,000**	**$140,000**	**$20,000**	**$30,000**	**$90,000**	**$70,000**	**$70,000**	**$140,000**
	Manage All Facits of Construction Project. Report Bi-Weekly to Oversite Committee: City Manager, Director of Parks, Recreation & Waterfront, Director of Public Works, City Supervising Engineer.										
6	**Environmental Monitoring Consultant**										
	Contract	**Contract**	**1**	**$50,000**	**$50,000**			**$30,000**	**$15,000**	**$35,000**	**$50,000**
	Project Monitoring and Adaptive Management Throughout The Project										
						$ 142,500	**$ 112,500**	**$ 2,745,000**			
					$ 3,000,000				**$ 1,500,000**	**$ 1,500,000**	**$ 3,000,000**

XI. Programmatic Capability and Past Performance history :

The City has over eighty (80) years of experience in implementing major capital improvement projects at the Berkeley Waterfront area with federal, state and regional funding and collaboration provided by USEPA; USFEMA; USACE; USFWS; CDFW; EBRPD; RWQCB; California Coastal Conservancy; California Wildlife Conservation Board; California Department of Boating and Waterways (DBAW); California Department of Parks and Recreation; the Land and Water Conservation Fund. In the past the City has completed several water-based capital projects using $36 million in State-funded DBAW Marina Improvement loans; projects included renovation of several Marina Docks and amenities and shoreline riprap erosion prevention.

The City restored habitat at the south end of the Main Lagoon in 2000 (including $100,000 in Habitat Conservation Fund support); performed technical habitat and hydrology studies cited in this funding application ($400,000 from 2003-2006); dredged the north end of the Main Lagoon in 2006 ($571,000); and in October 2020, performed a thorough cleaning and assessment of the five main tide tubes that connect AP ($550,000). The City has a comprehensive financial system and experienced finance and auditing staff to manage the accounting and auditing of all capital projects, and contracts for an independent audit of its federally funded capital projects (a single audit) on a yearly basis.

XII. Expenditure of Funds:

The expenditure of grants funds will begin within six months of award notice. All funds will be expended by three years or less from the notice of the award. The City of Berkely has the financial resources to provide the need funding until grants funds are received. The entire project will be carried out in an expeditious manner and the Project will be completed within three years .

XII. Partnerships:

The City of Berkeley can effectively carry the Project described in this proposal without the need for partnerships. As indicated above The City has over eighty (80) years of experience in implementing major capital improvement projects at the Berkeley Waterfront area with federal, state, and regional funding and collaboration provided by USEPA; USFEMA; USACE; USFWS; CDFW; EBRPD; RWQCB; California Coastal Conservancy; California Wildlife Conservation Board; California Department of Boating and Waterways (DBAW); California Department of Parks and Recreation; the Land and Water Conservation Fund. In the past the City has completed several water-based capital projects using $36 million in State-funded DBAW Marina Improvement loans; projects included renovation of several Marina Docks and amenities and shoreline riprap erosion prevention. Based on past experiences, the City of Berkeley is prepared and well suited to carry out the tasks required to complete this most valuable and important project.

Office of the Mayor

Jesse Arreguín
Mayor

August 15, 2023

U.S. EPA Grants Committee

RE: City of Berkeley's grant application – U.S. EPA Water Quality Program FY2023-24 – Aquatic Park Stormwater Treatment Installations at Aquatic Park

Dear EPA Grants Committee:

As Mayor of the City of Berkeley, I write in strong support of the City of Berkeley's grant application to the EPA Water Quality Grant Program of 2023 for the City's **Aquatic Park Stormwater Treatment Installations at Aquatic Park.**

The project will install hydrodynamic trash separators at the Bancroft and Channing Way storm culverts at Aquatic Park as well as a potential stormwater bioswale feature at Channing Way. This project is essential for improving the water quality of Aquatic Park and the adjacent waters of the San Francisco Bay.

Berkeley's Aquatic Park is a spectacular jewel of a public space that is visited by thousands of people per year. As an inland lagoon, it also provides critical habitat for birds migrating along the Pacific Skyway.

Over the past several years we have made critical improvements to Aquatic Park to preserve habitat, improve water quality and public recreation and open space access. This project will reduce pollution and improve water quality in Aquatic Park and the San Francisco Bay.

Sincerely,

Jesse Arreguín
Mayor, City of Berkeley

2180 Milvia Street, Berkeley, CA 94704 • Tel: 510.981.7100 • Fax: 510.981.7199 • TDD: 510.981.6903
E-Mail: mayor@cityofberkeley.info • Web: www.cityofberkeley.info/mayor

SAN FRANCISCO
BAYKEEPER®

August 16, 2023

U.S. EPA Grants Committee

RE: City of Berkeley's grant application – U.S. EPA Water Quality Program FY2023-24 – Aquatic Park Stormwater Treatment Installations at Aquatic Park

Dear EPA Grants Committee:

On behalf of San Francisco Baykeeper, we are writing to support the City of Berkeley's grant application to the EPA Water Quality Grant Program of 2023 for the City's **Aquatic Park Stormwater Treatment Installations at Aquatic Park.**

The project will install hydrodynamic trash separators at the Bancroft and Channing Way storm culverts at Aquatic Park as well as a potential stormwater bioswale feature at Channing Way. This project is essential for improving the water quality of Aquatic Park and the adjacent waters of the San Francisco Bay.

For over 34 years, San Francisco Baykeeper's mission has been to defend the Bay from the biggest threats and hold polluters accountable for the health of our communities and wildlife.

We have been strongly interested in improvement projects at Aquatic Park for decades, and we are looking forward to this project getting started.

Thank you for your time.

Sincerely,

Sejal Choksi-Chugh
Executive Director

Pollution hotline:
1 800 KEEP BAY
www.baykeeper.org

1736 Franklin Street, Suite 800
Oakland, CA 94612
(510) 735-9700

Berkeley Paddling & Rowing Club
2851 W Bolivar Drive
Berkeley, CA 94710

Tax ID 94-3112841

August 15, 2023

U.S. EPA Grants Committee

RE: City of Berkeley's grant application – U.S. EPA Water Quality Program FY2023-24 – Aquatic Park Stormwater Treatment Installations at Aquatic Park

Dear EPA Grants Committee:

On behalf of the Berkeley Paddling & Rowing Club we write in strong support of the City of Berkeley's grant application to the EPA Water Quality Grant Program of 2023 for the City's **Aquatic Park Stormwater Treatment Installations at Aquatic Park.**

The project will install hydrodynamic trash separators at the Bancroft and Channing Way storm culverts at Aquatic Park as well as a potential stormwater bioswale feature at Channing Way. This project is essential for improving the water quality of Aquatic Park and the adjacent waters of the San Francisco Bay.

Berkeley Paddling & Rowing Club was established more than 50 years ago with a mission to allow, support and encourage its Members to engage in rowing and the various paddle sports, and to train for local, National and International competition. It maintains equipment and facilities for the practice and enjoyment of these activities, and fosters a positive, collegial atmosphere. The Club, recognizing that healthy lives begin with a healthy environment, commits to responsible stewardship of the Berkeley Lagoon.

Berkeley's Aquatic Park is a spectacular jewel of a public space that is visited by thousands of people per year. As an inland lagoon, it also provides critical habitat for birds migrating along the Pacific Skyway. We have always been strongly interested in improvement projects at the Berkeley Waterfront in West Berkeley, as it directly impacts all of our members.

Sincerely,

Elaine Baden

President, Berkeley Paddling & Rowing Club

LETTER OF SUPPORT

Date: August 17, 2023

U.S. EPA Grants Committee

RE: City of Berkeley's grant application – U.S. EPA Water Quality Program FY2023-24 – Aquatic Park Stormwater Treatment Installations at Aquatic Park

Dear EPA Grants Committee:

As a West Berkeley resident with a vested interest in protecting and improving Aquatic Park, I write in strong support of the City of Berkeley's grant application to the EPA Water Quality Grant Program of 2023 for the City's **Aquatic Park Stormwater Treatment Installations at Aquatic Park.**

The project will perform the feasibility, design, and construction to install hydrodynamic trash separators at the Bancroft and Channing Way storm culverts at Aquatic Park as well as a potential stormwater bioswale feature at Channing Way. This project is essential for improving the water quality of Aquatic Park and the adjacent waters of the San Francisco Bay.

I am a resident of 5th and Channing and frequent the park via the Bancroft entrance. As an unwavering environmental advocate, I have orchestrated numerous trash collection initiatives at Aquatic Park. From my own firsthand encounters, I've witnessed the weightiest accumulation of refuse at these very culverts, aggravated by runoff, predominantly stemming from the alarming abundance of litter strewn along Bancroft adjacent to the railroad tracks. My findings have revealed that these culverts become obstructed by this refuse, triggering the spread of unsanitary conditions throughout the waters. Disconcertingly, there exists no current infrastructure to divert and treat this deluge of refuse away from the lagoon's pristine waters.

Berkeley's Aquatic Park is an awe-inspiring gem of public space, drawing in thousands annually. Beyond its allure, this inland lagoon functions as a crucial haven for avian migrants navigating the Pacific Skyway. As an impassioned birder and bird rescue volunteer, I implore you to champion the safeguarding of this habitat, benefiting the array of bird species that call this lagoon their home. Preserving an uncontaminated environment is pivotal for these migrating species, sparing them from ingesting scores of plastic particles and bacteria that can curtail their lifespans. Please refer to Appendix 1 for compelling images showcasing the birds reliant on the sanctuary of Aquatic Park.

In the past year, we've witnessed an upsurge in rainfall, resulting in elevated water levels that have diluted the lagoon with copious fresh water. This confluence, coupled with the lamentable state of the waters, has led to the tragic demise of multiple bat rays and leopard sharks. Moved by this calamity, I undertook the task of documenting this catastrophic die-off. On February 21, 2023, I conducted a somber count, revealing a heart-wrenching tally of 18 deceased rays and sharks, as shown in the attached Appendix 2.

Together, we stand at a pivotal juncture to secure the vitality of this cherished ecosystem. Your support is indispensable in charting a course toward a rejuvenated Aquatic Park, one that thrives as a sanctuary for both avian wonders and marine life alike.

Sincerely,

Cassandra Turgman
Local Activist

Appendix 1

Brown Pelicans, June 2023

Pekin Ducks visiting their nest, Aug 2022

Great Blue Heron, Jan 2023

Snowy Egret, Oct 2022

Black Crowned Night Heron, The Official Bird of Oakland, May 2022

Appendix 2

Dead leopard shark, Feb 2023

Dead bat rays, Feb 2023

Due to extensive rains, the water level rose and blocked the walking pathway, extending into the parking lot. Jan 2023

Friends of Five Creeks

Volunteers preserving and restoring watersheds of
North Berkeley, Albany, Kensington, south El Cerrito and Richmond since 1996
1236 Oxford St., Berkeley, CA 94709
510 848 9358 *f5creeks@gmail.com* *www.fivecreeks.org*

August 14, 2023

U.S.D.O.T. PROTECT Discretionary Grants Committee
RE: PROTECT Discretionary FY2023-24 Grant Program – Berkeley Aquatic Park Lagoon and Roadway Subsurface Culvert Resiliency Upgrade Project

Dear D.O.T. Grants Committee:

On behalf of the Friends of Five Creeks, a 27-year-old, all-volunteer organization working hands-on for creeks and watersheds, we are writing to support the City of Berkeley's grant application to the U.S.D.O.T. PROTECT Discretionary Grant Program of FY2023-24 for the City's **Berkeley Aquatic Park Lagoon and Roadway Subsurface Culvert Resiliency Upgrade Project.**

Our mission is to mobilize volunteers of all ages to restore, maintain, understand, and enjoy the creeks and watersheds of the East Bay from Berkeley to Richmond. We have worked for more than 15 years controlling invasives at the Aquatic Park lagoons. Recently, we have also focused on observing changes in Aquatic Park's brackish lagoons, including dwindling of some species and sudden die-offs of others. These observations may yield insights into longstanding concerns about urban runoff and pollution, water exchange and circulation, climate change, and sea-level rise.

The requested project will perform the feasibility and design work to renovate the existing subsurface transportation culverts (tide tubes) at Berkeley Aquatic Park, making them more resilient to the anticipated impacts of increased storms and rising seas. **A recent maintenance inspection project found that the culverts (located underneath Interstate 80) are projected to fail within ten years. Failure could lead to significant sinkhole damage across Interstate 80** in a section that sees over 520,000 vehicle trips per day, as well as significant stormwater flooding at numerous local businesses and roads at Aquatic Park and adjacent streets in West Berkeley.

These culverts are also important environmentally. Aquatic Park and its lagoons were hastily created during the Great Depression by the Works Progress Administration. Building of the Eastshore Highway, the first version of today's I-80 Freeway, as a feeder to the new Bay Bridge had cut off a long, shallow segment of Bay that immediately became a stagnant cesspool. With a few tide tubes, low-cost landscaping, and imaginative construction using recycled materials, the WPA created a new park that has remained a beautiful attraction to thousands of recreationists as well as many kinds of fish and birds. **However, water exchange, circulation, and inflow of polluted urban runoff have caused repeated problems beginning in the 1940s.** Most recently, in 2023, a mass die-off of bat rays and leopard sharks was followed by mass death of native mussels except near the main tide gates. Almost no small fish are to be seen, and birders note that they see few of the herons, egrets, cormorants, and pelicans that usually feed on them. **A major cause appears to have been prolonged winter storms, which trapped runoff, keeping the lagoons almost entirely fresh for long periods.**

Salinity in Aquatic Park had been close to that of the neighboring Bay. In 2022, the lagoons had healthy growth of red, brown, and green seaweeds. This summer, there are almost none. Instead, **a scummy, yellow-green filamentous algae covered areas of the main lagoon.**

In environmental matters, both causality and solutions are often complex. Nevertheless, common sense, observation, and repeated past studies indicate that the few tide tubes must be kept open. **The photos on the next page show some current problems.**

Middle lagoon at low tide. Above, inflow comes from lower pipe largely blocked by sediment. Note location of ripples. Upper pipe, shown by arrow at right, is broken and non-functional.

Dead bat ray (left) and mussels (above), Aquatic Park, 2023

Left: scummy filamentous algae, south end of Aquatic Park main lagoon, August 2023. I-80 in background.

All photo credits: Friends of Five Creeks. Photos may be used non-commercially.

Please consider this request favorably.

Sincerely,

Susan Schwartz, President, Friends of Five Creeks

SAVE AQUATIC PARK ACTION COMMITTEE

2431 Tenth Street Berkeley, CA 94710

August 16, 2023

U.S. D.O.T. PROTECT Discretionary Grants Committee

RE: PROTECT Discretionary FY2023-24 Grant Program - Berkeley Aquatic Park Lagoon and Roadway Subsurface Culvert Resiliency Upgrade Project

Dear D.O.T. Grants Committee:

The Save Aquatic Park Action Committee is an ad hoc group of approximately 20-25 Aquatic Park and Berkeley waterfront users and environmental activists who came together in 2019 to support the cleaning of the five central tide tubes, an effort that was successful. Toward this end, we held several informative walks that engaged residents, elected officials, City staff and appointed commissioners and raised awareness of park and waterfront problems. We are pleased to support the City of Berkeley grant application for the **Berkeley Aquatic Park Lagoon and Roadway Subsurface Culvert Resiliency Upgrade Project.**

Advocating for the cleaning of the tide tubes, we became aware of the dangers to I-80 in the deterioration of the Aquatic Park infrastructure, which was designed 90 years ago when the causeway road was only four lanes. As the freeway widened, the pipes underneath the roadway have weakened and are in need of rehabilitation and strengthening.

Your financial assistance in modernizing the infrastructure of Aquatic Park and protecting a vital regional highway is greatly appreciated.

Sincerely,
Toni Mester
Toni Mester, convener
Save Aquatic Park Action Committee

BERKELEY CITY COUNCILMEMBER
TERRY TAPLIN
DISTRICT 2

August 14, 2023

RE: City of Berkeley's Application (Aquatic Park Stormwater Treatment Installations)

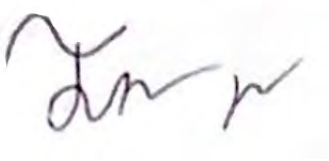
Dear United States Environmental Protection Agency's (EPA) National Water Program,

I write in strong support of the City of Berkeley's grant application for the EPA's National Water Program for Fiscal Year 2023-2024, entitled "Aquatic Park Stormwater Treatment Installations at Aquatic Park". This project, which performs the feasibility, design, and construction of hydrodynamic trash separators at the Bancroft Way and Channing Way storm culverts at Aquatic Park and potentially a stormwater bioswale feature at Channing Way, is essential for improving the water quality of Aquatic Park as well as the adjacent waters of the San Francisco Bay.

Aquatic Park is a spectacular jewel of a public space that is visited by thousands of people annually. As an inland lagoon, it provides a critical habitat for birds migrating along the Pacific Skyway. Residents and community members have been strongly interested in improvement projects in this region for decades. We cannot wait for this project to get started with your help.

Thank you for your time and attention in this matter. Should you have any questions, please do not hesitate to reach out by phone at 510-981-7120 or email at TTaplin@berkeleyca.gov.

Sincerely,



Councilmember Terry Taplin
Berkeley City Council, District 2

TTaplin@berkeleyca.gov | 510-981-7120 | 2180 Milvia Street, Berkeley, CA 94704
www.terrytaplin.com | @councilmember_terry_taplin | @taplinterry

WATERSIDE WORKSHOPS

84 Bolivar Drive
Berkeley, CA 94710
510-644-2577
watersideworkshops.org
Tax ID#: 26-0200654

August 14, 2023

U.S. EPA Grants Committee

RE: City of Berkeley's grant application – U.S. EPA Water Quality Program FY2023-24 – Aquatic Park Stormwater Treatment Installations at Aquatic Park

Dear EPA Grants Committee:

On behalf of Waterside Workshops, we write in strong support of the City of Berkeley's grant application to the EPA Water Quality Grant Program of 2023 for the City's Aquatic Park Stormwater Treatment Installations at Aquatic Park.

The project will install hydrodynamic trash separators at the Bancroft and Channing Way storm culverts at Aquatic Park as well as a potential stormwater bioswale feature at Channing Way. This project is essential for improving the water quality of Aquatic Park and the adjacent waters of the San Francisco Bay.

Waterside Workshops engages youth and community through hands-on learning in bicycle mechanics, wooden boatbuilding, and outdoor education. Waterside is a safe place for youth to feel heard, gain confidence, develop work skills, and access the tools and resources needed to lead healthy, sustainable lives.

Berkeley's Aquatic Park is a spectacular jewel of a public space that is visited by thousands of people per year. As an inland lagoon, it also provides critical habitat for birds migrating along the Pacific Skyway.

We have been strongly interested in water quality improvement projects at Aquatic Park for decades, and we can't wait for the project to get started.

Sincerely,

Rebecca Grove
Executive Director
Waterside Workshops
rebecca@watersideworkshops.org

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant: 13th
* b. Program/Project: 13th

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 11/06/2023
* b. End Date: 07/31/2026

18. Estimated Funding ($):

* a. Federal	1,500,000.00
* b. Applicant	1,500,000.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	3,000,000.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment | Delete Attachment | View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 18, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: Miss
* First Name: Dee
Middle Name:
* Last Name: Williams-Ridley
Suffix:

* Title: City Manager

* Telephone Number: (510) 981-7000
Fax Number:

* Email: sferris@berkeleyca.gov

* Signature of Authorized Representative: Completed by Grants.gov upon submission.
* Date Signed: Completed by Grants.gov upon submission.

BUDGET INFORMATION - Non-Construction Programs

OMB Number: 4040-0006
Expiration Date: 02/28/2025

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. EPA-R9-SFBWQIF-23-02	66.126	$	$	$ 1,500,000.00	$ 1,500,000.00	$ 3,000,000.00
2.						
3.						
4.						
5. Totals		$	$	$ 1,500,000.00	$ 1,500,000.00	$ 3,000,000.00

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SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY (1) EPA-R9-SFBWQIF-23-02	(2) N/A	(3) N/A	(4) N/A	Total (5)
a. Personnel	$ 0.00	$	$	$	$ 0.00
b. Fringe Benefits	0.00				0.00
c. Travel	0.00				0.00
d. Equipment	0.00				0.00
e. Supplies	0.00				0.00
f. Contractual	390,000.00				390,000.00
g. Construction	2,600,000.00				2,600,000.00
h. Other	10,000.00				10,000.00
i. Total Direct Charges (sum of 6a-6h)	3,000,000.00				$ 3,000,000.00
j. Indirect Charges	0.00				$ 0.00
k. TOTALS (sum of 6i and 6j)	$ 3,000,000.00	$	$	$	$ 3,000,000.00
7. Program Income	$ 0.00	$ 0.00	$ 0.00	$ 0.00	$ 0.00

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SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8. EPA-R9-SFBWQIF-23-02	$ 1,500,000.00	$	$	$ 1,500,000.00
9.				
10.				
11.				
12. TOTAL (sum of lines 8-11)	$ 1,500,000.00	$	$	$ 1,500,000.00

SECTION D - FORECASTED CASH NEEDS

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	$ 80,000.00	$	$ 25,000.00	$ 30,000.00	$ 25,000.00
14. Non-Federal	$				
15. TOTAL (sum of lines 13 and 14)	$ 80,000.00	$	$ 25,000.00	$ 30,000.00	$ 25,000.00

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program	FUTURE FUNDING PERIODS (YEARS) (b)First	(c) Second	(d) Third	(e) Fourth
16. EPA-R9-SFBWQIF-23-02	$ 80,000.00	$ 50,000.00	$ 1,370,000.00	$
17.				
18.				
19.				
20. TOTAL (sum of lines 16 - 19)	$ 80,000.00	$ 50,000.00	$ 1,370,000.00	$

SECTION F - OTHER BUDGET INFORMATION

21. Direct Charges:

22. Indirect Charges:

23. Remarks: